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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,756	07/30/2003	Takayuki Hattori	2927-0152P	6804

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FALLS CHURCH, VA 22040-0747

EXAMINER
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SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/24/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/24/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/629,756

Applicant(s)

HATTORI ET AL.

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. Claims 1-3 and 6-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, with respect to claim 1 and 18, applicants have identified the organometallic salts as metal salts of bis(fluoroalkylsulfonyl)imide and/or metal salts of fluoroalkyl sulfonic acid; therefore, it is unclear what limitation is conveyed by the language, "having fluoro groups and/or sulfonyl groups". It is noted that sulfonyl groups do not correspond to sulfonic acid groups.

Secondly, the  $\text{LiC}(\text{SO}_2\text{CF}_3)_3$  species of claim 17 fails to further limit claim 1, because the species is neither a metal salt of bis(fluoroalkylsulfonyl)imide nor a metal salt of fluoroalkyl sulfonic acid.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claims 1-3, 6-10, 12-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vreeland et al. ('001 or '457) or Gloyer et al. ('576), each in view of Barksby et al. ('445) and Knobel et al. ('669).

The primary references disclose rollers comprising an electrically conductive polyurethane coating, wherein the polyurethane is derived from a polyol free of unsaturation and contains a conductivity or charge control agent, such as an organometallic salt. See abstract; column 7, line 49; and column 10, lines 14-25 within Vreeland et al. ('001). See abstract; column 9, line 51; and column 12, lines 6-17 within Vreeland et al. ('457). See abstract and paragraphs [0054] and [0077] within Gloyer et al.

4. While the primary references disclose that the polyol reactant is free of unsaturation, the references fail to specifically recite applicants' claimed polyether polyol having the claimed degree of unsaturation. However, applicants' claimed low unsaturated polyether polyol was a known component for polyurethane elastomers having physical properties especially adapted for use in the manufacture of rollers. This position is supported by the teachings of Barksby et al. See abstract; column 6, lines 6-14; and column 7, lines 44+ within Barksby et al. Furthermore, applicants' claimed salts were specifically known at the time of invention to be useful for promoting electrical conductivity in polyurethanes. See abstract; column 4, line 65; column 6, lines 23+; and columns 7 and 8 within Knobel et al.

5. Therefore, since applicants' claimed low unsaturation polyether polyol was known to be useful for producing rollers having improved properties and since applicants' claimed salts were known conductivity agents for polyurethanes, the position is taken that it would have been obvious to incorporate these components within the electrically conductive polyurethanes of the

primary references, so as to obtain a composition and roller having the improved properties disclosed by the secondary references. This position is bolstered by the fact that it has been held that it is *prima facie* obvious to utilize a known compound for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

6. Claims 1-3, 6-10 and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vreeland et al. ('001 or '457) or Gloyer et al. ('576), each in view of Barksby et al. ('445) and further in view of Wen et al. ('897 or '639) or Sandlin et al. ('451) or Noh et al. (US 2002/0042002 A1).

The primary references disclose rollers comprising an electrically conductive polyurethane coating, wherein the polyurethane is derived from a polyol free of unsaturation and contains a conductivity or charge control agent, such as an organometallic salt. See abstract; column 7, line 49; and column 10, lines 14-25 within Vreeland et al. ('001). See abstract; column 9, line 51; and column 12, lines 6-17 within Vreeland et al. ('457). See abstract and paragraphs [0054] and [0077] within Gloyer et al.

7. While the primary references disclose that the polyol reactant is free of unsaturation, the references fail to specifically recite applicants' claimed polyether polyol having the claimed degree of unsaturation. However, applicants' claimed low unsaturated polyether polyol was a known component for polyurethane elastomers having physical properties especially adapted for use in the manufacture of rollers. This position is supported by the teachings of Barksby et al. See abstract; column 6, lines 6-14; and column 7, lines 44+ within Barksby et al. Furthermore, applicants' claimed imide salt was specifically known at the time of invention to be useful for promoting electrical conductivity in polyurethanes. See abstract; column 3, line 22; and column

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4, line 63 within Wen et al. ('897). See abstract and column 2, line 33 within Wen et al. ('639). See abstract and Examples within Sandlin et al. See abstract and paragraph [0049] within Noh et al. (It is noted that Noh et al. improperly indicates that the imide compound is an amide; however, the correct identity of the compound would be immediately evident to the skilled artisan in view of the use of the art recognized abbreviation, LiTFSI.).

8. Therefore, since applicants' claimed low unsaturation polyether polyol was known to be useful for producing rollers having improved properties and since applicants' claimed salts were known conductivity agents for polyurethanes, the position is taken that it would have been obvious to incorporate these components within the electrically conductive polyurethanes of the primary references, so as to obtain a composition and roller having the improved properties disclosed by the secondary references. This position is bolstered by the fact that it has been held that it is *prima facie* obvious to utilize a known compound for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vreeland et al. ('001 or '457) or Gloyer et al. ('576), each in view of Barksby et al. ('445) and Knobel et al. ('669) as applied to claims 1-3, 6-10, 12-16, and 18 above, and further in view of Nogami et al. ('646) or Priebe et al. ('188).

As aforementioned, the teachings of Vreeland et al. ('001 or '457) or Gloyer et al. ('576), each in view of Barksby et al. ('445) and Knobel et al. ('669) are considered to render applicants' composition and roller *prima facie* obvious; however, these references are silent regarding applicants' plasma treatment of the metal shaft. Still, the treatment of metal with plasma to improve its adhesion to other layers, including polymers, was known at the time of

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invention. See column 10, lines 4-10 within Nogami et al. See abstract and column 2, lines 20+ within Priebe et al. Therefore, the position is taken that it would have been *prima facie* obvious to plasma treat the metal shaft of the roller prior to application of the elastomer, so as to improve the adhesion of the elastomer to the metal surface and the durability of the resulting roller.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vreeland et al. ('001 or '457) or Gloyer et al. ('576), each in view of Barksby et al. ('445) and further in view of Wen et al. ('897 or '639) or Sandlin et al. ('451) or Noh et al. (US 2002/0042002 A1) as applied to claims 1-3, 6-10, and 12-19 above, and further in view of Nogami et al. ('646) or Priebe et al. ('188).

As aforementioned, the teachings of Vreeland et al. ('001 or '457) or Gloyer et al. ('576), each in view of Barksby et al. ('445) and further in view of Wen et al. ('897 or '639) or Sandlin et al. ('451) or Noh et al. (US 2002/0042002 A1) are considered to render applicants' composition and roller *prima facie* obvious; however, these references are silent regarding applicants' plasma treatment of the metal shaft. Still, the treatment of metal with plasma to improve its adhesion to other layers, including polymers, was known at the time of invention. See column 10, lines 4-10 within Nogami et al. See abstract and column 2, lines 20+ within Priebe et al. Therefore, the position is taken that it would have been *prima facie* obvious to plasma treat the metal shaft of the roller prior to application of the elastomer, so as to improve the adhesion of the elastomer to the metal surface and the durability of the resulting roller.

11. Applicants' amendment and response of October 30, 2006 have been considered, and the prior art rejections have been modified accordingly. Applicants have argued that all of the cited art fails to disclose applicants' claimed non-saturation degree. In response, applicants' claimed

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non-saturation degree characteristic is the same as the unsaturation characteristic of Barksby et al., and Barksby et al. disclose at column 7, line 50 that the polyether polyol has an unsaturation level as low as 0.002 meq/g. Therefore, despite applicants' response, Barksby et al. **clearly and definitively** disclose the argued non-saturation degree. Additionally, the examiner has considered applicants' examples for evidence of unexpected results; however, the examples of the invention are not commensurate in scope with the claims, and the comparative examples are not representative of the closest available upon prior art (i.e.; the relied-upon prior art). Therefore, the examples are inadequate to rebut the *prima facie* case of obviousness.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

  
RABON SERGENT  
PRIMARY EXAMINER

R. Sergent  
January 20, 2007